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IAP6 Rec'd PCT/PTO 21 NOV 2005

**IN THE UNITED STATES DESIGNATED/ELECTED OFFICE**

International Application No. : PCT/EP2004/005234  
International Filing Date : May 14, 2004  
Priority Date(s) Claimed : May 21, 2003  
Applicant(s) (DO/EO/US) : Michael HECKMEIER et al.

Title: LIQUID-CRYSTALLINE MEDIUM

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.56, 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This information disclosure statement is made in accordance with 37 C.F.R. §§ 1.56, 1.97 and 1.98 as follows:

**Timing and Fees**

- ☒ Under 37 C.F.R. § 1.97(b), no fee or statement is required for filing this information disclosure statement is filed:
- ☐ within three months of the filing date of a national application other than a CPA under § 1.53(d);
  - ☐ within three months of the actual filing date of the national phase of a PCT application; OR
  - ☒ before the mailing of a first substantive office action (including after filing of an RCE).
- ☐ Under 37 C.F.R. § 1.97(c), this information disclosure statement is filed after the periods specified in 37 C.F.R. § 1.97(b), but before the mailing date of:
- a final rejection under 37 C.F.R. 1.113;
  - termination of prosecution, e.g. Ex Parte Quayle, M.P.E.P § 609(B)(2); OR
  - a notice of allowance under 37 C.F.R. § 1.311; and

is accompanied by:

- ☐ the statement as specified in 37 C.F.R. § 1.97(e) set out below; OR
  - ☐ a check covering the fee of \$180.00 under 37 C.F.R. § 1.17(p).
- ☐ Under 37 C.F.R. § 1.97(d), this information disclosure statement is filed after the mailing date of the following actions which have not been withdrawn:
- ☐ a final action under 37 C.F.R. § 1.113;
  - ☐ termination of prosecution, e.g. Ex Parte Quayle, M.P.E.P § 609(B)(2);
  - ☐ OR a notice of allowance under 37 C.F.R. § 1.311;

AND is filed on or before payment of the issue fee; AND is accompanied by:

the statement as specified in 37 C.F.R. § 1.97(e) as set forth below, and the fee of \$180.00 under 37 C.F.R. § 1.17(p).

Statements Under 37 C.F.R. 1.97(e)

- ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application having a mailing date not more than three months prior to the filing date of this information disclosure statement; or
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned attorney after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing date of the information disclosure statement.

Cited Materials

- ☐ Copies of materials listed but not attached were cited in benefit (35 U.S.C. § 120) ancestor application Serial No. \_\_\_\_\_, on Form 892 by the Examiner and/or Form 1449 by the applicant; see 37 C.F.R. § 1.98(d).
- ☒ Copies of materials listed but not attached were cited in an international search report dated August 4, 2004.
- ☐ Not required by 37 CFR § 1.98.
- ☐ Copies of the materials listed are attached (except for the foregoing).

### Non-English Language References

☒ An English-language search report or equivalent paper from a foreign patent office is provided indicating the relevance of the cited reference(s).

☐ A foreign-language search report from a foreign patent office is provided, and pertinent parts are translated substantively below:

X = document of particular relevance when it is taken alone

Y = document of particular relevance when it is combined with another such document

A = document defining the general state of the art

O = non-written disclosure

P = intercalated document

T = document cited to understand the theory or principle underlying the invention

E = patent document which has the benefit of a date earlier than the filing date and which was published only on or after this filing date

D = cited in the application

L = cited for another reason

& = publication of member of same patent family

☐ Translation of other relevant information on foreign search report

[insert necessary translation here]

### Other Information

#### Payment of Fees Due (If Any):

☐ A check for \$\_\_\_\_\_ covering the fee identified above is attached.

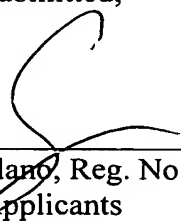
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☒ The Commissioner is hereby authorized to charge or credit any overpayment to Deposit Account #13-3402, two copies of this paper are attached for this purpose.

Respectfully submitted,

  
\_\_\_\_\_  
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Attorney for Applicants

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Attorney Docket No.: MERCK-3091

Date: November 21, 2005

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 3

### Complete if Known

Application Number	PCT/EP2004/005234
Filing Date	November 21, 2005
First Named Inventor	Michael HECKMEIER et al.
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	MERCK-3091

### U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code <sup>2</sup> (if known)		
	1	5679285			October 21, 1997
	2	6017469			January 25, 2000
	3	6544602			April 8, 2003
	4	5370822			December 6, 1994
	5	5641432			June 24, 1997
	6	5358662			October 25, 1994
	7	5055220			October 8, 1991
	8	5208386			May 4 1993
	9	5645759			July 8, 1997
	10	2002066887			June 6, 2002
	11	6399162			June 4, 2002
	12	2002166994			November 14, 2002
	13	6254941			July 3, 2001
	14	6576303			June 10, 2003

### FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	15	DE	19505189		Merck Patent GmbH	June 27, 1996		Equv to cite 1
	16	EP	0727406		Merck Patent GmbH	August 21, 1996		Equv to cite 1
	17	WO	9530723		Merck Patent GmbH	November 16, 1995		Equv to cite 2
	18	DE	10020061		Merck Patent GmbH	December 7, 2000		Equv to cite 3
	19	DE	3509170		Merck Patent GmbH	September 18, 1986		
	20	EP	0588291		CHISSO CORP	March 23, 1994		Equv to cite 4
	21	EP	0688754		CHISSO CORP	December 27, 1995		Equv to cite 5
	22	EP	0571916		CHISSO CORP	December 1, 1993		Equv to cite 6
	23	EP	0422958		CHISSO CORP	April 17, 1991		Equv to cite 7

Examiner  
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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. Number refers to English language corresponding family member.

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				Filing Date	November 21, 2005
				First Named Inventor	Michael HECKMEIER et al.
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
				Attorney Docket Number	MERCK-3091

Sheet	2	of	3
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Examiner Initials *	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	24	EP	0470590		Dainippon Ink &	February 12,		Equv to cite 8
	25	EP	0704512		CHISSO CORP	April 3, 1996		Equv to cite 9
	26	EP	1122292		CHISSO Petrochemical	August 8, 2001		Equv to cite 10
	27	DE	10018599		Merck Patent GmbH	November 9,		Equv to cite 11
	28	EP	0934919		CHISSO CORP	August 11, 1999		Equv to cite 12
	29	EP	0950651		CHISSO CORP	October 20, 1999		Equv to cite 13
	30	WO	0039063		CHISSO CORP	July 6, 2000		Equv to cite 14
	31	JP	04210669		Dainippon Ink & Chem.	July 31, 1992		
	32	JP	11029582		CHISSO CORP	February 27,		
	33	JP	09302344		CHISSO CORP	November 25,		
	34	JP	10067694		CHISSO CORP.	March 10, 1998		

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